

Applied Chemistry of Western and Chinese Medicines

Assignment

Short questions (30 marks)

1. (i) What is the major difference between antiviral and antibacterial drugs?
(4 marks)
- (ii) Draw the structure of penicillin and label which parts are essential for the action on bacteria.
(6 marks)

2. Many antibiotics are now available in the market.
 - (i) What are antibiotics? (1 mark)
 - (ii) Why they are so successful? (2 marks)
 - (iii) Give TWO examples of antibiotics. (2 marks)
 - (iv) List out the FIVE major mechanisms for their action. (5 marks)

3. The active site of an enzyme has to be on or near the surface of the enzyme if a drug is to reach it.
 - (i) What are the difference between “Fischer’s lock and key hypothesis” and “Koshland’s theory” for the binding of drugs to the active site?
(6 marks)
 - (ii) What are the binding forces involved?
(4 marks)

Long questions (60 marks)

1. Briefly describe the structure-activity relationships of sulphonamide. (20 marks)

2. Write short notes on the intermolecular binding forces of drugs on their targets.
(20 marks)

3. Explain in details the mechanism of action of penicillin.

(20 marks)

Note:

- The deadline for this assignment will be on **27 March 2020 before 17:30**.
- Please submit your assignment **through moodle**.
- Marks will be **DEDUCTED** for any **LATE** submission.